

United States Environmental Protection Agency
Region 10
1200 Sixth Avenue
Seattle, Washington 98101

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT
DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Clean Water Act, 33 U.S.C. §1251 et seq., as amended by the Water Quality Act of 1987, P.L. 100-4, the "CWA",

Microchip Technology Incorporated
1111 39th Avenue S.E.
Puyallup, WA 98374-2122

is authorized to discharge from a wastewater treatment facility located in the City of Puyallup to receiving waters named the Puyallup River at latitude 47° 12' 25" N, longitude 122° 19' 15" W, in accordance with discharge point(s), effluent limitations, monitoring requirements and other conditions set forth herein.

This permit shall become effective January 1, 2005

This permit and the authorization to discharge shall expire at midnight, January 1, 2010

The permittee shall reapply for a permit reissuance on or before **June 16, 2009** 180 days before the expiration of this permit if the permittee intends to continue operations and discharges at the facility beyond the term of this permit.

Signed this 17th day of November, 2004 .

/s/ Robert R. Robichaud
Michael F. Gearheard
Director
Office of Water and Watersheds

TABLE OF CONTENTS

SUBMITTAL/TASK DEADLINES	1
I. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS	2
A. Outfall 001 Effluent Limits and Monitoring Requirements (Discharge to the Puyallup River)	2
B. Method Detection Limits	5
C. Whole Effluent Toxicity Testing - Chronic	5
D. Receiving Water Monitoring Requirements	9
E. Discharge to the City of Puyallup Sewer System	10
II. MONITORING, RECORDING, AND REPORTING REQUIREMENTS	11
A. Quality Assurance Plan	11
B. Fluoride Study	11
C. Representative Sampling	12
D. Monitoring Procedures	12
E. Reporting of Monitoring Results	13
F. Additional Monitoring by the Permittee	13
G. Records Contents	14
H. Retention of Records	14
I. Twenty-four Hour Notice of Noncompliance Reporting	14
J. Other Noncompliance Reporting	15
K. Changes in Discharge of Toxic Substances	15
L. Compliance Schedules	16
III. COMPLIANCE RESPONSIBILITIES	16
A. Duty to Comply	16
B. Penalties for Violations of Permit Conditions	16
C. Need to Halt or Reduce Activity not a Defense	19
D. Duty to Mitigate	19
E. Operation and Maintenance	19
F. Removed Substances	21
G. Bypass of Treatment Facilities	21
H. Upset Conditions	22
I. Toxic Pollutants	23
J. Planned Changes	23
K. Anticipated Noncompliance	23
IV. GENERAL PROVISIONS	23
A. Permit Actions	23
B. Duty to Reapply	23
C. Duty to Provide Information	23
D. Other Information	24
E. Signatory Requirements	24

F.	Availability of Reports	25
G.	Inspection and Entry	25
H.	Oil and Hazardous Substance Liability	25
I.	Property Rights	26
J.	Severability	26
K.	Transfers	26
L.	State Laws	26
M.	Reopener Clause	26
V.	DEFINITIONS	27

SUBMITTAL/TASK DEADLINES

The following is a summary of some of the items the permittee must complete and/or submit to EPA, the Puyallup Tribe and/or the Washington Department of Ecology (Ecology) during the term of this permit:

Item	Task Deadline	Receiving Party
Discharge Monitoring Reports (including TTO statement)	Monthly, postmarked no later than the 28 th day of the following month	EPA with copies to the Puyallup Tribe and Ecology
Whole Effluent Toxicity results	Postmarked by January 28 th of each year	EPA with copies to the Puyallup Tribe and Ecology
Receiving Water Monitoring results	Postmarked by January 28 th of each year	EPA and the Puyallup Tribe
Toxicity Reduction Evaluation workplan	The sooner of 90 days from wafer production or January 1, 2008	EPA
Quality Assurance Plan	April 1, 2005	The Puyallup Tribe
Fluoride Study results OR Fluoride Toxicity Study	the sooner of six months from wafer production or January 1, 2008 July 1, 2005	The Puyallup Tribe
Review of Operation and Maintenance Plan	July 1, 2005	The Plan shall be retained on site
Pollution Prevention Plan for arsenic and mercury and a Solvent Management Plan for the control of total toxic organic compounds	July 1, 2006	The Puyallup Tribe
Application for permit renewal	July 1, 2009	EPA, with copies to the Puyallup Tribe and WDOE

I. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

A. Outfall 001 Effluent Limits and Monitoring Requirements
(Discharge to the Puyallup River)

1. The permittee is authorized to discharge from outfall 001, subject to the restrictions set forth herein. This permit does not authorize the discharge of any waste streams, including spills and other unintentional or non-routine discharges of pollutants, that are not part of the normal operation of the facility as disclosed in the permit application, or any pollutants that are not ordinarily present in such waste streams. Batch discharges and non-process wastewater including, but not limited to, cooling tower and boiler blowdown waste streams, shall be prohibited from being discharged to the Puyallup River via outfall 001. Maintenance of the tightline pending notification and authorization of the Tribe, however, shall be allowed. Effluent limitations are maximum values unless otherwise noted.
2. The permittee must collect effluent samples from the effluent stream after the last treatment unit prior to discharge into the receiving waters. The effluent samples must not be influenced by combination with other effluent (such as the City of Puyallup).
3. There shall be no discharge of floating, suspended or submerged matter such that it causes a nuisance or objectionable condition or impairs designated beneficial uses.
4. The effluent limit for mercury shall no longer apply commencing July 1, 2007 provided that the following four objectives are met and the permittee certifies that the chemical reagents used to operate the Puyallup facility do not contain mercury at concentrations likely to exceed tribal water quality criteria.
 - a. the discharge meets the maximum daily limit of 49 ng/l for the twenty four months, beginning August 1, 2005;
 - b. the discharge meets an average monthly performance objective of 12 ng/l from August 1, 2006 to July 1, 2007, with samples taken twice weekly to document compliance;
 - c. the average monthly flow for the 24-month performance evaluation period, August 1, 2005 to July 1, 2007 is 0.6 MGD or higher; and

- d. the permittee develops and implements a mercury pollution prevention program per Item III.E.4.

The four objectives above (I.A.4) are not enforceable effluent limits but the monitoring data collected to demonstrate performance shall be used to determine compliance with effluent limits in Table 1.

5. Total Toxic Organics

A narrative statement must be submitted with each discharge monitoring report certifying that:

“Based on my inquiry of the persons directly responsible for managing compliance with the permit limitation for total toxic organics, I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewaters has occurred since filing the last discharge monitoring report. I further certify that this facility is implementing the solvent management plan submitted to and approved by the Tribe.”

Table 1: Effluent Limits and Monitoring Requirements				
Parameter (units)	Effluent Limits		Sampling Requirements	
	Avg. Monthly	Max. Daily¹	Sample Frequency	Sample Type
Flow (mgd)	1.88	1.88	Continuous	Recording
pH (standard units)	6.2 -9.0		Continuous	Recording
5-Day Biochemical Oxygen Demand (BOD ₅) (mg/L) (lb/day)	14 88	28 175	1/week	24-hr Composite
Total Suspended Solids (TSS) (mg/L) (lb/day)	11 172	23 360	1/week	24-hr Composite
Total Ammonia as N (mg/L) (lb/day)	5.7 89	15.3 240	1/week	24-hr Composite
Phosphorous (mg/L)	1	3	1/week	24-hr Composite
Fluoride (mg/L)	13	20	1/week	24-hr Composite
Arsenic, inorganic (µg/L)	0.68 ²	1.8 ²	1/month ²	24-hr Composite
Arsenic, inorganic (µg/L)	---	---	1/month ³	24-hr Composite
Mercury, total recoverable (ng/L)	—	80 ⁴ 49 ⁵	1/month 2/week	24-hr Composite
Total Residual Chlorine (µg/L)	17 ⁶	34 ⁶	1/week	Grab
Temperature (°C)	24	24	Continuous	Probe
Total Toxic Organics (mg/L)	1.37	1.37	1/year ⁸	Grab
Mean Cell Residence Time, MCRT (days)	—	—	1/month	Calculated ⁷
Whole Effluent Toxicity, Chronic (TU _C)	—	—	Semi-Annual ⁸	See Part I.C

Footnotes:

1. Reporting is required within 24 hours of a maximum daily limit violation. See Part II.I
2. The compliance evaluation level shall be 5 ug/L as determined using Standard Method 200.8.
3. Additional monthly monitoring of arsenic shall occur using Standard Method 6020 and be reporting to the Tribe.
4. The limit shall apply from the effective date of the permit to July 1, 2005.
5. The effluent limit shall apply from August 1, 2005 unless the provisions of Section I.A.4 are met. If the permittee intends to comply with the objectives of Section I.A.4, monitoring shall occur twice weekly beginning August 1, 2005.
6. The effluent limit for total residual chlorine is not quantifiable using EPA approved test methods. Therefore, the EPA will use the minimum level (ML) of 100 µg/L as the compliance evaluation level.
7. For MCRT determination, samples will be obtained from the SOLR reactor and the SOLR solids waste stream.
8. Effluent monitoring results shall be reported with January discharge monitoring report.

B. Method Detection Limits.

For all monitoring, the permittee shall use methods that can achieve a method detection level (MDL) equal to 0.1 times the effluent limitation or the most sensitive EPA approved method, whichever is greater. If the analytical result for any sample is below the MDL, the permittee shall report "less than {numeric MDL}" on the discharge monitoring report (DMR). For purposes of averaging results, the permittee shall use actual values for all values above the MDL and zero for values below the MDL.

C. Whole Effluent Toxicity Testing - Chronic.

The permittee shall conduct semi-annual chronic toxicity tests on 24-hour composite effluent samples from outfall 001 for the effective period of the permit. Testing shall be conducted in accordance with subsections 1 through 6, below.

1. Test Species and Methods

- a. The permittee shall conduct short-term tests with the water flea, *Ceriodaphnia dubia* (survival and reproduction test) and the fathead minnow, *Pimephales promelas* (larval survival and growth test).
- b. Each test shall be a static-renewal test, conducted on three 24-hour composite samples of effluent (collected on days one, three, and five). In addition, a split of the first sample collected for each test shall be analyzed for the chemical and physical parameters required in Table 1 above. When the timing of sample collection coincides with that of the

sampling required in Table 1 and Table 2, analysis of the split sample will fulfill those requirements.

- c. The presence of toxicity shall be estimated as specified in *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, Third Edition, EPA/600-4-91-002, July 1994.
- d. Results shall be calculated in chronic toxic units (TU_c), where $TU_c = 100/NOEC$. If in the calculation of an NOEC, two tested concentrations cause statistically significant effects but an intermediate concentration does not, the permittee must either repeat the test or use the lowest concentration to calculate the NOEC.

2. Quality Assurance

- a. The toxicity testing on each organism shall include a series of five test dilutions and a control. The series shall include one dilution equal to 9 percent effluent, two dilutions above 9 percent, and two dilutions below 9 percent.
- b. All quality assurance criteria and statistical analyses used for chronic tests and reference toxicant tests shall be in accordance with *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, Third Edition, EPA/600-4-91-002, July 1994, and individual test protocols.
- c. In addition to those quality assurance measures specified in the methodology, the following quality assurance procedures shall be followed:
 - i) Control and dilution water can be laboratory water for the purposes of DMR reporting. If the dilution water used is different from the culture water, a second control, using culture water shall also be used. In no case shall water that has not met test acceptability criteria be used as dilution water.

The permittee has agreed to conduct concurrent WET testing using receiving waters. For purposes of this paragraph, "receiving water" means water collected from the Puyallup River upstream from the permittee's

discharge. These results shall be submitted to the Puyallup Tribe's Environmental Protection Department.

- ii) If organisms are not cultured in-house, concurrent testing with reference toxicants shall also be conducted. Where organisms are cultured in-house, quarterly reference toxicant testing is sufficient. Reference toxicant tests shall be conducted using the same test conditions as the effluent toxicity tests (same test duration, etc).
- iii) If either the reference toxicant test or the effluent test do not meet all test acceptability criteria as specified in the manual, the permittee must re-sample and re-test as soon as possible.

3. Reporting

- a. The permittee shall submit the full report for each toxicity test with the **January DMR**.
- b. Toxicity test results shall be reported in TU_c .
- c. Test results for chronic tests shall include all relevant information in Section 10, Report Preparation, of *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, Third Edition, EPA/600-4-91-002, July 1994.
- d. The full report shall include:
 - i) chronic toxicity test results;
 - ii) dates of sample collection and initiation of each test;
 - iii) flow rate at the time of sample collection; and
 - iv) results of the monitoring required in Table 1 of the permit.

4. Preparation of Initial Investigation Toxic Reduction Evaluation Workplan

The permittee shall develop and submit to EPA an initial investigation Toxicity Reduction Evaluation (TRE) workplan within **90 days of the start of wafer production or January 1, 2008**,

whichever is sooner. This plan shall describe the steps the permittee intends to follow if toxicity is detected, and should include, at a minimum:

- a. A description of the investigation and evaluation techniques that would be used to identify potential causes/sources of toxicity, effluent variability, and treatment system efficiency.
- b. A description of the facility's methods of maximizing in-house treatment efficiency, good housekeeping practices, and a list of all chemicals used at the facility.
- c. A determination of whether any necessary toxicity identification evaluation (TIE) will be conducted in-house or sent out to contractors.

5. Accelerated Testing

- a. If toxicity is greater than 11 TU_c the permittee shall conduct six more biweekly tests over a twelve-week period. Accelerated testing must be initiated within two weeks of receipt of the test results which indicate an exceedence.
- b. If the permittee is able to adequately demonstrate through an evaluation of facility operations that the cause of the exceedence(s) is known and corrective actions have been immediately implemented, or in cases where additional test quality assurance/quality control is necessary, only one additional test is necessary. If toxicity is greater than 11.5 TU_c in this test, paragraph 6, below, shall apply.
- c. If chronic toxicity is greater than 11.5 during accelerated testing, the permittee must initiate a toxicity reduction evaluation as outlined in paragraph 6, below, within fifteen days of the exceedence.
- d. If none of the six tests indicates toxicity greater than 11.5 TU_c the permittee may return to the normal testing frequency.

6. Toxicity Reduction Evaluation (TRE) and Toxicity Identification Evaluation (TIE).

- a. If toxicity is greater than 11.5 TU_c in any of the six biweekly tests, the permittee shall initiate a TRE in accordance with *Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants* (EPA 833-B-99-002, August 1999).
- b. The permittee will develop a more detailed TRE workplan as expeditiously as possible. At a minimum, the workplan will include:
 - i) further actions to investigate and identify the cause of toxicity;
 - ii) actions the permittee will take to mitigate the impact of the discharge and to prevent the recurrence of toxicity; and
 - iii) a schedule for these actions.
- c. The permittee may initiate a TIE as part of the overall TRE process described in the EPA acute and chronic TIE manuals EPA/600/6-91/005F (Phase I), EPA/600/R-92/080 (Phase II), and EPA-600/R-92/081 (Phase III).
- d. If a TIE is initiated prior to completion of the accelerated testing, the accelerated testing schedule may be terminated, or used as necessary in performing the TIE.

D. Receiving Water Monitoring Requirements.

The permittee must conduct surface water monitoring. Annual surface water monitoring is required at the edge of the mixing zone to evaluate compliance with the Puyallup Tribe's Water Quality Standards. The program must meet the following requirements:

- 1. A monitoring location for total ammonia, temperature, chlorine and mercury must be established in the Puyallup River 302 feet below the facility's outfall at the edge of the mixing zone.
- 2. To the extent practicable, surface water sample collection must occur on the same day as effluent sample collection and during low river flow conditions.
- 3. Samples must be analyzed for the parameters listed in Table 2.

Table 2 - Receiving Water Monitoring Requirements			
Parameter	Monitoring Location	Sampling Frequency	Sampling Type
Total Ammonia as N, mg/L	Downstream of outfall at edge of mixing zone	1/year	Grab
Temperature, ° C	Downstream of outfall at edge of mixing zone	1/year	Grab
Total Residual Chlorine, mg/L	Downstream of outfall at edge of mixing zone	1/year	Grab
Mercury, ng/L	Downstream of outfall at edge of mixing zone	1/year	Grab

4. Quality assurance/quality control plans for all the monitoring must be documented in the Quality Assurance Plan required under Part II.A., Quality Assurance Plan.
5. Receiving water monitoring results must be submitted to EPA and the Puyallup Tribe's Environmental Protection Department with January's discharge monitoring report. At a minimum, the results must include the following:
 - a. Dates of sample collection and analyses.
 - b. Results of sample analysis
 - c. Relevant quality assurance/quality control (QA/QC) information.

E. Discharge to the City of Puyallup Sewer System.

The permittee may divert its SOLR Membrane Bioreactor (MBR) effluent, non-process cooling tower blowdown, boiler blowdown, and UPW pretreatment train backwash and RO/UF reject stream, and certain effectively pretreated, categorical process wastewater to the City sanitary sewer provided the effluent receives treatment no less than that described in Microchip's Engineering Report (Brown and Caldwell, 2001, Engineering Report for Microchip Technology Incorporated, October 31, 2001), the permittee submits revised plans 30 days prior to diverting the flow, the City approves the discharge, and the permittee continues to monitor and report MCRT as specified in Table 1. A copy of the permittee's written request and any City approval shall be sent to the Director, the Tribe, and to the Department of Ecology.

II. MONITORING, RECORDING, AND REPORTING REQUIREMENTS

A. Quality Assurance Plan.

1. The permittee shall develop a Quality Assurance Plan (QAP) for all monitoring requirements identified in the permit. The plan shall be submitted to the Puyallup Tribe's Environmental Protection Department **April 1, 2005** of the permit and approved prior to being implemented within **July 1, 2005** of the permit.
2. At a minimum, the plan shall include the following:
 - a. Protocols for sampling techniques (field blanks, replicates, duplicates, control samples, etc.),
 - b. Sample preservation methods,
 - c. Sample shipment procedures,
 - d. Instrument calibration procedures and preventive maintenance (frequency, standard, spare parts),
 - e. Qualification and training of personnel, and
 - f. Analytical test methods that achieve the method detection limits in Section II.B including quality control checks, quantification/detection levels.
3. Throughout all sample collection and analysis activities, the permittee shall use the EPA approved quality assurance, quality control, and chain-of-custody procedures described in: *Requirements for Quality Assurance Project Plans*, EPA QA/R-5 and *Guidance on Quality Assurance Project Plans*, EPA QA/G-5.
4. The permittee shall amend the QAP whenever there is a modification in sample collection, sample analysis, or other procedure addressed by the QAP.
5. Copies of the QAP shall be kept on site and made available to EPA or Ecology upon request.

B. Fluoride Study. The permittee shall commence a study **within six months of the start of wafer production or January 1, 2008, whichever is sooner** to study the alternate use of process chemicals that

don't contain fluoride as an active ingredient. A report on the feasibility of alternate chemical use shall be submitted to the Tribe's Environmental Protection Department within **six months of the commencement of the study**. The feasibility report shall be reviewed and approved by the Tribe's Environmental Protection Department prior to implementation.

OR

If process chemicals that contain fluoride are used at the permitted facility, a fluoride toxicity study shall be conducted to ensure compliance with Section 5(1) of the Water Quality Standards for Surface Waters of the Puyallup Tribe. Section 5(1) of the Tribe's Water Quality Standards state "Toxic substances shall not be introduced above natural background levels in surface waters of the Puyallup tribe which have the potential either singularly or cumulatively to adversely affect characteristic uses, cause acute or chronic conditions to the most sensitive biota dependent on those waters, or adversely affect public health, as determined by the Tribe's Environmental Department." The study's scope and methods shall be approved by the Tribe's Environmental Department within the first 6 months of the effective date of the permit, prior to commencing the study.

- C. Representative Sampling. The permittee shall collect all effluent samples from the effluent stream prior to discharge into the receiving waters and after the last treatment unit. Samples and measurements shall be representative of the volume and nature of the monitored discharge.

In order to ensure that the effluent limits set forth in this permit are not violated at times other than when routine samples are taken, the permittee shall collect additional samples whenever any discharge occurs that may reasonably be expected to cause or contribute to a violation that is unlikely to be detected by a routine sample. The permittee shall analyze the additional samples for those parameters limited in Part I.A. of this permit.

The permittee shall collect such additional samples as soon as the spill, discharge, upset, or bypassed effluent reaches the outfall. The samples shall be analyzed in accordance with paragraph II.D ("Monitoring Procedures"). The permittee shall report all additional monitoring in accordance with paragraph II.F ("Additional Monitoring by Permittee").

- D. Monitoring Procedures. Monitoring must be conducted according to test procedures approved under 40 CFR 136, unless other test procedures have been specified in this permit or approved by EPA.

- E. Reporting of Monitoring Results. Monitoring results shall be reported each month on the DMR form. Laboratory analytical results and a summary of the data with respect to effluent limits, complete with data qualifiers (as necessary) shall be attached to the DMR. The reports shall be submitted monthly and are to be postmarked by the 28th day of the following month. Legible copies of these, and all other reports, shall be signed and certified in accordance with the requirements of Part IV.E. (Signatory Requirements) and submitted to the Director, Office of Water, the Puyallup Tribe's Environmental Protection Department, and the Washington Department of Ecology at the following addresses:

original to:

United States Environmental Protection Agency Region 10
PCS Data Entry
1200 Sixth Avenue, OW-133
Seattle, Washington 98101

copy to:

The Puyallup Tribe
Environmental Protection Department
2002 East 28th Street
Tacoma, Washington 98404

copy to:

Department of Ecology
Southwest Regional Office
P.O. Box 47775
Olympia, Washington 98504-7775

- F. Additional Monitoring by the Permittee. If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR 136 or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR. Such increased frequency shall also be indicated and an explanation of why such additional monitoring was performed.

Upon request by the Director, the permittee shall submit results of any other sampling, regardless of the test method used.

- G. Records Contents. Records of monitoring information shall include:
1. The date, exact place, and time of sampling or measurements;
 2. The individual(s) who performed the sampling or measurements;
 3. The date(s) analyses were performed;
 4. The individual(s) who performed the analyses;
 5. The analytical techniques or methods used; and
 6. The results of such analyses.
- H. Retention of Records. The permittee shall retain records of all monitoring information, including but not limited to all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, and records of all data used to complete the application for this permit, for a period of at least five years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time. **A copy of this NPDES permit must be maintained on-site for the duration of activity at the permitted location.**
- I. Twenty-four Hour Notice of Noncompliance Reporting.
1. The following occurrences of noncompliance shall be reported by telephone within 24 hours from the time the permittee becomes aware of the circumstances:
 - a. Any unanticipated bypass which exceeds any effluent limitation in the permit (See Part V.G, Bypass of Treatment Facilities);
 - b. Any upset which exceeds any effluent limitation in the permit (See Part V.H, Upset Conditions); or
 - c. Any violation of a maximum daily discharge limitation for any of the pollutants in Table 1 requiring 24-hour reporting.
 2. A written submission shall also be provided within five days of the time that the permittee becomes aware of the circumstances. The written submission shall contain:

- a. A description of the noncompliance and its cause;
 - b. The period of noncompliance, including exact dates and times;
 - c. The estimated time noncompliance is expected to continue if it has not been corrected; and
 - d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
 3. The Director may waive the written report on a case-by-case basis if the oral report has been received within 24 hours by the NPDES Compliance Unit in Seattle, Washington, by phone, (206) 553-1846.
 4. Reports shall be submitted to the addresses in Part IV.D (Reporting of Monitoring Results).
- J. Other Noncompliance Reporting. Instances of noncompliance not required to be reported within 24 hours shall be reported at the time that monitoring reports for Part IV.D (Reporting of Monitoring Results) are submitted. The report shall contain the information listed in Part IV.H.2 (Twenty-four Hour Notice of Noncompliance Reporting).
- K. Changes in Discharge of Toxic Substances. The permittee must notify the Director and Puyallup Tribe's Environmental Protection Department as soon as it knows, or has reason to believe:
1. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in the permit, if that discharge may reasonably be expected to exceed the highest of the following "notification levels":
 - a. One hundred micrograms per liter (100 µg/l);
 - b. Two hundred micrograms per liter (200 µg/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/l) for 2,4-dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;
 - c. Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7); or

- d. The level established by the Director in accordance with 40 CFR 122.44(f).
- 2. That any activity has occurred or will occur that would result in any discharge, on a non-routine or infrequent basis, of any toxic pollutant that is not limited in the permit, if that discharge may reasonably be expected to exceed the highest of the following "notification levels":
 - a. Five hundred micrograms per liter (500 µg/l);
 - b. One milligram per liter (1 mg/l) for antimony;
 - c. Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7); or
 - d. The level established by the Director in accordance with 40 CFR 122.44(f).
- L. Compliance Schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit must be submitted no later than 14 days following each schedule date.

III. COMPLIANCE RESPONSIBILITIES

- A. Duty to Comply. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
- B. Penalties for Violations of Permit Conditions
 - 1. Civil Penalties. Pursuant to 40 CFR 19 and the Act, any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or

402(b)(8) of the Act, is subject to a civil penalty not to exceed the maximum amounts authorized by Section 309(d) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. § 2461 note) as amended by the Debt Collection Improvement Act (31 U.S.C. § 3701 note) (currently \$31,500 per day for each violation)

2. Administrative Penalties. Any person may be assessed an administrative penalty by the Administrator for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Pursuant to 40 CFR 19 and the Act, administrative penalties for Class I violations are not to exceed the maximum amounts authorized by section 309(g)(2)(A) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. § 2461 note) as amended by the Debt Collection Improvement Act (31 U.S.C. § 3701 note) (currently \$11,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$27,500). Pursuant to 40 CFR 19 and the Act, penalties for Class II violations are not to exceed the maximum amounts authorized by section 309(g)(2)(B) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. § 2461 note) as amended by the Debt Collection Improvement Act (31 U.S.C. § 3701 note) (currently \$11,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$137,500).

3. Criminal Penalties.

- a. Negligent Violations. The Act provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 or the Act, or any condition or limitation implementing any of such section in a permit issued under section 402 of the Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than 1 year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than 2 years, or both.

- b. **Knowing Violations.** Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than 3 years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than 6 years, or both.
- c. **Knowing Endangerment.** Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the Act, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$100,000,000 and can be fined up to \$2,000,000 for a second or subsequent convictions.
- d. **False Statements.** The Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or both. The Act further provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by

imprisonment for not more than 6 months per violation, or by both.

- C. Need to Halt or Reduce Activity not a Defense. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- D. Duty to Mitigate. The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.
- E. Operation and Maintenance.
 - 1. The permittee will prepare a Wastewater Treatment System Operating Plan (WWTSOP) as an umbrella document for the various plans required under this permit. All plans identified in this permit shall be included as elements of the WWTSOP, rather than as separate stand-alone plans. The WWTSOP shall include the Operation and Maintenance Plan; Interim Startup and Operation Activities (ISUOA), Revision 3.0-October 2004; and Microchip Fab 3: Summary of Arsenic Analysis and Program. The WWTSOP shall be provided to the Tribe's Environmental Protection Department upon completion in accordance with II.E.
 - 2. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used, by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance (O & M) also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.
 - 3. By **July 1, 2008** of the permit, the permittee shall review its operation and maintenance plan and ensure that it includes appropriate best management practices (BMPs). The O&M plan shall include measures which prevent or minimize the potential for the release of pollutants to the Puyallup River. The Plan shall be retained on site and made available to EPA, the Tribe's Environmental Protection Department, or Ecology upon request.

4. The permittee shall develop a description of pollution prevention measures and controls appropriate for the facility, and implement such controls. The appropriateness and priorities of controls in the WWTSOP shall reflect identified potential sources of pollutants at the facility. The description of BMPs shall address, to the extent practicable, the following minimum components:

- a. Spill prevention and control;
- b. Optimization of chemical use;

The permittee will also develop Pollution Prevention Plans for Arsenic and Mercury to control the discharge of these two metals and a Solvent Management Plan for the control of Total Toxic Organic Compounds. These plans shall be submitted to the Tribe's Environmental Protection Department by July 1, 2006 and approved by the Tribe prior to implementation. These plans may be a part of the WWTSOP. The substitution of reagent grade chemicals for technical grade chemicals are approved for implementation on the effective date of the permit.

5. All known, available and reasonable methods of prevention, control and treatment (AKART) shall be used to reduce arsenic concentrations of wastewater discharges. AKART shall include an arsenic pollution prevention and source control program, which includes:

- a. procuring commercially available non-process chemicals with the lowest possible concentrations of arsenic and evaluation of other potential sources of arsenic contributing arsenic to the wastewater;
- b. evaluation of chemical procurement policies, manufacturing processes, tightline and/or pollution control equipment for contributing arsenic to the wastewater (in addition to arsenic contributed in non-process flows); and
- c. Implementation of available treatment technologies (adsorption) to reduce arsenic concentrations of wastewater prior to discharge. Certification shall be provided to the Tribe that the chosen technology meets AKART at the time operations commence.

6. All procedures set forth in the Interim Startup and Operation Activities plan (Revision 3.0-October 2004 or as may be updated with approval of the Tribe) shall be followed while the facility is idle and/or during start-up operations.
- F. Removed Substances. Solids, sludges, or other pollutants removed in the course of treatment or control of water and wastewaters must be disposed of in a manner such as to prevent any pollutant from such materials from entering navigable waters.
- G. Bypass of Treatment Facilities.
1. Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs 2 and 3 of this section.
 2. Notice.
 - a. Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least 10 days before the date of the bypass.
 - b. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required under Part II.I (Twenty-four Hour Notice of Noncompliance Reporting).
 3. Prohibition of bypass.
 - a. Bypass is prohibited and the Director may take enforcement action against a permittee for a bypass, unless:
 - i) The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
 - ii) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise

of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

- iii) The permittee submitted notices as required under paragraph 2 of this section.
- b. The Director of EPA's Office of Water may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed in paragraph 3.a. of this section.

H. Upset Conditions.

- 1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph 2 of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
- 2. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - a. An upset occurred and that the permittee can identify the cause(s) of the upset;
 - b. The permitted facility was at the time being properly operated;
 - c. The permittee submitted notice of the upset as required under Part II.I ("Twenty-four Hour Notice of Noncompliance Reporting"); and
 - d. The permittee complied with any remedial measures required under Part III.D ("Duty to Mitigate").
- 3. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

- I. Toxic Pollutants. The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.
- J. Planned Changes. The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when the alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. (This notification applies to pollutants which are not subject to effluent limitations in the permit or notification requirements under 122.42(a)(1)).
- K. Anticipated Noncompliance. The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

IV. GENERAL PROVISIONS

- A. Permit Actions. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
- B. Duty to Reapply. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. The application must be submitted at least **July 1, 2009** of this permit unless the Administrator grants permission to submit the application at a later date.
- C. Duty to Provide Information. The permittee shall furnish to the Director and the Tribe's Environmental Protection Department, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director or Tribe's Environmental Protection Department, upon request, copies of records required to be kept by this permit.

- D. Other Information. When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or any report to the Director and/or Tribe's Environmental Protection Department, it shall promptly submit such facts or information.
- E. Signatory Requirements. All applications, reports or information submitted to the Director and/or Tribe's Environmental Protection Department shall be signed and certified.
1. All permit applications shall be signed by either a principal executive officer or ranking elected official.
 2. All reports required by the permit and other information requested by the Director or Tribe's Environmental Protection Department shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - a. The authorization is made in writing by a person described above and submitted to the Director, and
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)
 3. Changes to authorization. If an authorization under paragraph IV.E.2. is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph IV.E.2. must be submitted to the Director and Tribe's Environmental Protection Department prior to or together with any reports, information, or applications to be signed by an authorized representative.
 4. Certification. Any person signing a document under this section shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

- F. Availability of Reports. Except for data determined to be confidential under 40 CFR Part 2, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Director. As required by the CWA, permit applications, permits and effluent data shall not be considered confidential.
- G. Inspection and Entry. The permittee shall allow the Director, the Tribe's Environmental Protection Department, the Department of Ecology or an authorized representative (including an authorized contractor acting as a representative of the Administrator), upon the presentation of credentials and other documents as may be required by law, to:
 - 1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
 - 2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
 - 3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
 - 4. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the CWA, any substances or parameters at any location.
- H. Oil and Hazardous Substance Liability. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the CWA.

- I. Property Rights. The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws for regulations.
- J. Severability. The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.
- K. Transfers. This permit may be automatically transferred to a new permittee if:
 - 1. The current permittee notifies the Director and the Tribe's Environmental Protection Department at least 30 days in advance of the proposed transfer date;
 - 2. The notice includes a written agreement between the existing and new permittees containing a specific date for transfer of permit responsibility, coverage, and liability between them; and
 - 3. The Director does not notify the existing permittee and the proposed new permittee of his or her intent to modify, or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in paragraph 2 above.
- L. State Laws. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by Section 510 of the Clean Water Act.
- M. Reopener Clause. This permit is subject to modification, revocation and reissuance, or termination at the request of any interested person (including the permittee) or upon EPA initiative. However, permits may only be modified, revoked or reissued, or terminated for the reasons specified in 40 CFR 122.62 or 122.64, and 40 CFR 124.5. This includes new information which was not available at the time of permit issuance and would have justified the application of different permit conditions at the time of issuance, including but not limited to future monitoring results.

All requests for permit modification must be addressed to EPA in writing and shall contain facts or reasons supporting the request.

V. DEFINITIONS

1. "Administrator" means the Administrator of the EPA, or an authorized representative.
2. "Average monthly discharge limitation" means the highest allowable average of "daily discharges" over a calendar month. For pollutants other than fecal coliform bacteria, the average monthly discharge shall be calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month. For fecal coliform bacteria, the average monthly discharge shall be calculated as a geometric mean.
3. "Average weekly discharge limitation" means the highest allowable average of "daily discharges" over a calendar week. The average weekly discharge shall be calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week.
4. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.
5. "Chronic toxic unit" ("TU_c") is a measure of chronic toxicity. The number of chronic toxic units in the effluent is calculated as 100/NOEC, where the NOEC is measured in percent effluent.
6. "Daily discharge" means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the day.
7. "Department" means the Puyallup Tribe of Indians' Environmental Protection Department.
8. "Department of Ecology" means the Washington Department of Ecology , Southwest Region Office.

9. "Director" means the Director of the Office of Water, EPA, or an authorized representative.
10. "DMR" means discharge monitoring report.
11. "EPA" means the United States Environmental Protection Agency.
12. "Grab" sample is a single sample or measurement taken at a specific time or over as short a period of time as is feasible.
13. "Maximum daily discharge limitation" means the highest allowable "daily discharge."
14. Mean Cell Residence Time (MCRT)" means the average time that a microbial cell remains in an activated system. It is equal to the mass of cells divided by the rate of cell wasting from the system.
15. "Method Detection Limit (MDL)" means the minimum concentration of an analyte that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero as determined by a specific laboratory method.
16. "Minimum Level (ML)" means the concentration at which the entire analytical system gives recognizable signals and an acceptable calibration. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes and processing steps have been followed.
17. "No observed effect concentration (NOEC)" is the highest tested concentration of an effluent at which no adverse effects are observed on the test organisms at the specific time of observation.
18. "Regional Administrator" means the EPA Region 10 Regional Administrator, or an authorized representative.
19. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

20. "Start of wafer production" means the first date that the permittee issues the first lot of wafers after completion of tool and process qualifications.
21. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
22. "Waste stream" means any non-de minimus stream of pollutants within the permittee's facility that enters any permitted outfall or navigable waters. This includes spills and other unintentional, non-routine or unanticipated discharges.
23. A "24-hour composite" sample shall mean a flow-proportioned mixture of not less than 8 discrete aliquots. Each aliquot shall be a grab sample of not less than 100 ml and shall be collected and stored in accordance with procedures prescribed in the most recent edition of *Standard Methods for the Examination of Water and Wastewater*.